



ecology and environment, inc.

Global Environmental Specialists

720 Third Avenue, Suite 1700
Seattle, Washington 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: June 30, 2015

TO: Eric Nuchims, Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-4 Chemist, E & E, Seattle, Washington *MW*

SUBJ: **Organic Data Quality Assurance Review, John Day Vapor Response Site,
John Day, Oregon**

REF: TDD: 15-05-0005 PAN: 1004530.0004.111.02

The data quality assurance review of three water samples collected from the John Day Vapor Response site in John Day, Oregon, has been completed. Gasoline range organics analysis (Ecology Method NWTPH-Gx) was performed by TestAmerica, Inc., Tacoma, Washington. All sample analyses were evaluated following EPA's Stage 2B and/or 4 Data Validation Electronic and/or Manual Process (S2B/4VE/M).

The samples were numbered:

15053150 15053151 15053152

Data Qualifications:

1. Sample Holding Times: Acceptable.

The samples were maintained and received within the QC limits of $< 6^{\circ}\text{C}$. The samples were collected on June 7, 2015, and were analyzed on June 12, 2015, therefore meeting QC criteria of less than 7 days between collection and analysis for unpreserved water samples.

2. Initial Calibration: Acceptable.

Calculations were verified as correct. All relative percent differences (RPDs) were less than or equal to the laboratory control limits.

3. Continuing Calibration: Satisfactory.

Calculations were verified as correct. All percent differences were less than or equal to the laboratory control limits except two surrogates with high recoveries in the 6-11-15 calibration; no actions were taken based on these outliers as all sample surrogate recoveries were within QC limits.

4. Error Determination: Not Performed.

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

5. Blanks: Acceptable.

A method blank was analyzed at the required frequency of every 12 hours for each matrix, preparation technique, and analysis system. Gasoline-range TPHs were not detected in any blank.

6. System Monitoring Compounds (SMC): Satisfactory.

All sample recoveries of the SMCs were greater than 10% and within QC criteria. The surrogates in one continuing calibration exceeded QC limits; no actions were taken as all sample SMC results were within QC limits.

7. Performance Evaluation Samples: Not Provided.

Performance evaluation samples were not provided to the laboratory.

8. Matrix and Blank Spikes: Satisfactory.

Blank spike results were greater than laboratory QC limits; no actions were taken as gasoline range organics were not detected in any sample.

9. Duplicates: Satisfactory.

Laboratory spike duplicate results were outside laboratory QC limits; no actions were taken as gasoline range organics were not detected in any sample.

10. Quantitation and Quantitation Limits: Acceptable.

Sample quantitation and sample quantitation limits were correctly calculated.

11. Laboratory Contact: Not Required.

No laboratory contact was required.

12. Overall Assessment of Data for Use

The overall usefulness of the data is based on the criteria outlined in the site-specific sampling plan Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Directive "Quality Assurance/Quality Control Guidance for Removal Activities, Data Validation Procedures" (EPA/540/G-90/004) and the analytical method. Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- JH - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with a high bias.
- JL - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with a low bias.
- JK - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with an unknown direction of bias.
- JQ - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with an unknown direction of bias and falls between the MDL and the Minimum (or Practical) Quantitation Limit (MQL, PQL).
- N - The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification".
- NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Analytical Data

Client: Ecology and Environment, Inc.

Job Number: 580-50631-1

Client Sample ID: 15053150

Lab Sample ID: 580-50631-1

Date Sampled: 06/07/2015 1500

Client Matrix: Water

Date Received: 06/09/2015 1606

NWTPH-Gx Northwest - Volatile Petroleum Products (GC)

Analysis Method: NWTPH-Gx	Analysis Batch: 580-191892	Instrument ID: SEA006
Prep Method: 5030B	N/A	Initial Weight/Volume: 5 mL
Dilution: 1.0		Final Weight/Volume: 5 mL
Analysis Date: 06/12/2015 0436		Injection Volume: 5 mL
Prep Date: 06/12/2015 0436		Result Type: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Gasoline	ND	<i>mu</i>	0.027 <i>V</i>	0.050

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	95		50 - 150
Trifluorotoluene (Surr)	108		50 - 150

MW 6-30-15

Analytical Data

Client: Ecology and Environment, Inc.

Job Number: 580-50631-1

Client Sample ID: 15053151

Lab Sample ID: 580-50631-2

Date Sampled: 06/07/2015 1530

Client Matrix: Water

Date Received: 06/09/2015 1606

NWTPH-Gx Northwest - Volatile Petroleum Products (GC)

Analysis Method:	NWTPH-Gx	Analysis Batch:	580-191892	Instrument ID:	SEA006
Prep Method:	5030B		N/A	Initial Weight/Volume:	5 mL
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	06/12/2015 0509			Injection Volume:	5 mL
Prep Date:	06/12/2015 0509			Result Type:	PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Gasoline	ND	<i>MW</i>	0.027 <i>U</i>	0.050
Surrogate	%Rec	Qualifier	Acceptance Limits	
4-Bromofluorobenzene (Surr)	96		50 - 150	
Trifluorotoluene (Surr)	104		50 - 150	

MW 6-30-15

Analytical Data

Client: Ecology and Environment, Inc.

Job Number: 580-50631-1

Client Sample ID: 15053152

Lab Sample ID: 580-50631-3

Date Sampled: 06/07/2015 1600

Client Matrix: Water

Date Received: 06/09/2015 1606

NWTPH-Gx Northwest - Volatile Petroleum Products (GC)

Analysis Method:	NWTPH-Gx	Analysis Batch:	580-191994	Instrument ID:	SEA006
Prep Method:	5030B		N/A	Initial Weight/Volume:	5 mL
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	06/12/2015 2348			Injection Volume:	5 mL
Prep Date:	06/12/2015 2348			Result Type:	PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Gasoline	ND		0.027	0.050

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	96		50 - 150
Trifluorotoluene (Surr)	83		50 - 150

mw 63015